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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,211	03/02/2004	Thomas E. Becker	HES 2002-IP-008430U1	1986
28857	7590	06/02/2006	EXAMINER	
CRAIG W. RODDY HALLIBURTON ENERGY SERVICES P.O. BOX 1431 DUNCAN, OK 73536-0440			BOMAR, THOMAS S	
			ART UNIT	PAPER NUMBER
			3672	

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/791,211	BECKER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Shane Bomar	3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-12 and 23-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-12 and 23-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/12/05, 1/13/06</u>   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
3. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent 3,417,816 to Morris et al in view of US patent 5,135,577 to Brothers.

Regarding claims 1-5, Morris et al teach a method for sealing casing in a borehole comprising: preparing a sealing composition (see col. 4, lines 45-51); placing the sealing composition between the casing 14 and the borehole (see Fig. 4); placing a heating tool 32 in the casing (see Fig. 4); and operating the heating tool to heat the sealing composition at the location of the heating tool to accelerate the setting of the composition (see col. 4, line 71 through col. 5, line 16). However, it is not explicitly taught that the sealing composition comprises a latex sealant from the currently claimed group.

Brothers teaches a method for sealing casing in a borehole similar to that of Morris et al (see col. 5, lines 6-8). It is further taught that the sealing composition comprises a cement slurry and a latex sealant from the currently claimed group (see col. 2, lines 47-63, and col. 3, lines 12-27 and lines 47-62). It would have been obvious to one of ordinary skill in the art, having the teachings of Morris et al and Brothers before him at the time the invention was made, to modify the method taught by Morris et al to include the sealing composition of Brothers, in order to obtain a composition that prevents thermal thinning (see col. 2, lines 4-14 of Brothers). One would have been motivated to make such a combination since Morris et al state in lines 45-48 of column 4 that any of a number of sealing compositions can be used as long as they are converted to a solid once the casing is in place, wherein Brothers teaches just such a composition that requires less latex than previously used in the art and also prevents thermal thinning of the composition.

Regarding claim 6, the combination applied to claim 3 teaches that water is present in the slurry in the claimed range (see col. 3, lines 63-67 of Brothers).

4. Claims 9, 10, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morris et al in view of US patent 4,489,785 to Cole.

Regarding claims 9 and 10, Morris et al teach a method for sealing casing in a borehole comprising: preparing a sealing composition (see col. 4, lines 45-51); placing the sealing composition between the casing 14 and the borehole (see Fig. 4); placing a heating tool 32 in the casing (see Fig. 4); and operating the heating tool to heat the sealing composition at the location of the heating tool to accelerate the setting of the composition (see col. 4, line 71 through col. 5,

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line 16). However, it is not explicitly taught that the sealing composition comprises an epoxy liquid comprising resin, associated hardener, and inert filler material.

Cole teaches a method for sealing casing in a borehole similar to that of Morris et al. It is further taught that the sealing composition comprises an epoxy liquid comprising resin, associated hardener, and inert filler material, wherein the resin is a condensation product of epichlorohydrin and bisphenol A (see, for example, col. 2, lines 20-34). It would have been obvious to one of ordinary skill in the art, having the teachings of Morris et al and Cole before him at the time the invention was made, to modify the sealing composition taught by Morris et al to include the composition of Cole, in order to obtain a composition that remains substantially free of stress related cracking after setting (see col. 2, lines 3-6 of Cole). One would have been motivated to make such a combination since Morris et al state in lines 45-48 of column 4 that any of a number of sealing compositions can be used as long as they are converted to a solid once the casing is in place, wherein Cole teaches just such a composition that ultimately remains substantially free of stress related cracking after setting.

Regarding claim 23, the combination applied to claim 9 above teaches that the sealing composition comprises cement because, at the very least, Coles composition is actually referred to as cement (see col. 4, lines 31-34).

5. Claims 8, 11, 12, and 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morris et al in view of Brothers or Cole as applied to claim 3 or 9 above, and further in view of US patent 6,330,917 to Chatterji et al.

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Regarding claims 8, 11, and 12, the combination of Morris et al and Brothers teaches the cement slurry and latex of claim 3. However, it is not expressly taught that the slurry and latex also contains epoxy resins.

Chatterji et al teach a sealing composition similar to the aforementioned references. It is further taught that the sealing composition comprises cement slurry, epoxy resins, *and* latexes (see col. 2, line 65 through col. 3, line 2). It would have been obvious to one of ordinary skill in the art, having the teachings of the combination and Chatterji et al before him at the time the invention was made, to modify the method of sealing taught by the combination to include the step of combining the cement slurry with the resin and latexes of Chatterji et al, in order to obtain an improved sealing composition. One would have been motivated to make such a combination because the references address the narrow problem of using additives in sealing compositions to change the setting times and/or properties of the composition, therefore a person seeking to solve that exact problem would consult the references and apply their teachings together. The combination would also yield a sealing composition that has high compressive, tensile, and bond strengths (see col. 2, lines 35-41 of Chatterji et al).

Regarding claims 24-28, the combination of Morris et al and Cole teaches the sealing composition of claim 9, although it is not taught that the composition also includes latex. As analogously shown above, Chatterji et al provide motivation for combining the epoxy composition with latex. Brothers also provides evidence for the notoriously known cement slurry properties of claims 24-27.

***Response to Arguments***

6. Applicant's arguments with respect to claims 1 and 9 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

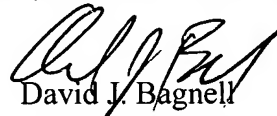
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shane Bomar whose telephone number is 571-272-7026. The examiner can normally be reached on Monday - Thursday from 6:30am to 4:00pm. The examiner can also be reached on alternate Fridays.

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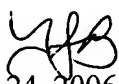
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David J. Bagnell  
Supervisory Patent Examiner  
Art Unit 3672

tsb



May 24, 2006